

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PTO-988-08 (11-95)

Approved for use through 10/31/99. OMB 0651-0031  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

## REQUEST FOR ACCESS OF ABANDONED APPLICATION UNDER 37 CFR 1.14(a)

RECEIVED  
AUG 10 2001  
File Information Unit

In re Application of	
Reiffin	
Application Number	Filed
06/719,507	4-3-85
Group Art Unit	Examiner

Paper No. #48

Assistant Commissioner for Patents  
Washington, DC 20231

I hereby request access under 37 CFR 1.14(a)(3)(iv) to the application file record of the above-identified ABANDONED application, which is: (CHECK ONE)

- (A) referred to in United States Patent Number 5,694,603 column 1
- (B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11, i.e., Application No. \_\_\_\_\_ filed \_\_\_\_\_ on page \_\_\_\_\_ of paper number \_\_\_\_\_
- (C) an application that claims the benefit of the filing date of an application that is open to public inspection, i.e., Application No. \_\_\_\_\_ filed \_\_\_\_\_ or
- (D) an application in which the applicant has filed an authorization to lay open the complete application to the public.

Please direct any correspondence concerning this request to the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Rayline Petitt  
Signature

Rayline Petitt  
Typed or printed name

8/10/01

Date

FOR PTO USE ONLY

Approved by: JP  
(Initials)

Unit: File Information Unit



US005694603A

**United States Patent [19]**  
**Reiffin**

[11] Patent Number: **5,694,603**  
[45] Date of Patent: **Dec. 2, 1997**

[54] COMPUTER MEMORY PRODUCT WITH  
PREEMPTIVE MULTITHREADING  
SOFTWARE

[76] Inventor: Martin G. Reiffin, 5439 Blackhawk  
Dr., Danville, Calif. 94526

[21] Appl. No.: **496,282**

[22] Filed: **Mar. 20, 1990**

**Related U.S. Application Data**

[63] Continuation of Ser. No. 425,612, Sep. 28, 1982, abandoned,  
and Ser. No. 719,507, Apr. 3, 1985, abandoned.

[51] Int. Cl. <sup>6</sup> ..... **G06F 9/46**

[52] U.S. Cl. ..... **395/677**

[58] Field of Search ..... **395/800, 375,**  
**395/650, 677, 678**

[56] **References Cited**

**U.S. PATENT DOCUMENTS**

3,614,745	10/1971	Poduin	.....	395/650
4,084,228	4/1978	Dufond et al.	.....	395/650
4,383,307	5/1983	Gibson, III	.....	395/575
4,513,391	4/1985	Maddock	.....	395/146
4,671,684	6/1987	Kojima et al.	.....	400/63
4,724,285	2/1988	Lefler et al.	.....	178/21
4,773,009	9/1988	Kucera et al.	.....	364/419
4,887,212	12/1989	Zamora et al.	.....	364/419

**OTHER PUBLICATIONS**

Hiromoto, Robert, *Parallel-processing a large scientific problem*, AFIPS Press, 1981, pp. 235-237.

Ousterhout, John K., *Scheduling techniques for Concurrent Systems*, IEEE, 1982, pp. 22-30.

Andrews, Gregory R., *Synchronizing Resources*, ACM Transactions on Programming Languages and Systems, vol. 3, No. 4, Oct. 1981, pp. 405-430.

Collin, A. J. T., *The Implementation of STAB-I*, Software—Practice and Experience, vol. 2, 1972, pp. 137-142.

Artym, Richard, *The STAB Multiprocessing Environment for CYBER-M*, Software—Practice and Experience, vol. 12, 1982, pp. 323-329.

Treleaven et al., *Combining Data Flow and Control Flow Computing*, The Computer Journal, vol. 25, No. 2, 1982, pp. 207-217.

Duffie, C. A. III, *Task Scheduling Algorithm for a Teleprocessing Communications Controller*, IBM Technical Disclosure Bulletin, vol. 16, No. 10, Marcy 1974, pp. 3349-3352.

Hoare, C. A. R., *Towards a Theory of Parallel Programming*, Operating Systems Techniques, Proceedings of a Seminar held at Queen's University, Belfast, 1972, Academic Press, 1972, pp. 61-71.

Cheriton, David Ross, *Multi-Process Structuring and the Thoath Operating System*, Doctoral Thesis, University of Waterloo, 1978.

Redell et al., *Pilot: An Operating System for a Personal Computer*, Communications of the ACM, Feb. 1980, vol. 23, No. 2, pp. 81-92.

Lampson et al., *Experience with Processes and Monitors in Mesa*, Communications of the ACM, Feb. 1980, vol. 23, No. 2, pp. 105-117.

Hughes, Lawrence, E., "System Programming Under CP/M-80," 1983, pp. 109-112 and 127-138.

**Primary Examiner—Richard L. Ellis**

[57] **ABSTRACT**

A multithreading computer system for the preemptive asynchronous concurrent execution of a plurality of instruction threads of a multithreaded application program. As an illustrative example of one of the many uses of the invention, the disclosed application program comprises a compiler thread and an editor thread. The compiler processes the source code while the programmer edits the source code at the keyboard. An interrupt service routine repeatedly activates the editor thread to provide a preemptive asynchronous editing process for either entry of new source code or modification of the previously entered code, while the compiler thread concurrently processes the source code during the time intervals between keystrokes. The interrupt service routine may be activated either by a keyboard interrupt or periodically by a clock at predetermined time intervals.

**41 Claims, 9 Drawing Sheets**

